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ABSTRACT

Based on research relating William Perry's scheme of cognitive development to foreign language proficiency, a developmental hypothesis concerning language ability is proposed. This approach suggests that lower developmental stages in the cognitive domain retard the achievement of communicative language proficiency, while higher developmental stages facilitate it. Perry's hierarchical scheme, chronicling the changing ways in which individuals explain their understanding of experience, truth, and behavior, and the American Council on the Teaching of Foreign Languages (ACTFL) oral proficiency scale, also hierarchical, show some correspondence. Certain cognitive tasks appear to underlie tasks in the proficiency scale. Empirical evidence of this relationship is drawn from a French conversation and composition course in which reading, writing, and discussion-leading were designed to encourage and challenge students at different levels of cognitive development as defined by Perry. The results help explain the fossilization of learner varieties of language occurring often at the level of 2/2+. The proposed model treats aptitude not as a fixed set of capacities but as a changing interrelationship of a variety of capacities, including personal, language, diversity, contextual. (MSE)

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THE RELATIONSHIP BETWEEN COGNITIVE DEVELOPMENT AND FOREIGN LANGUAGE PROFICIENCY

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If we want to talk about language aptitude, we need to ask, "Which aptitude?"

Here's an example. Theodore V. Higgs is a college Spanish teacher and noted linguist at San Diego State. With Ray Clifford, he wrote a well-known article in 1982 called "The Push Toward Communication" (Higgs 1982). There they present their theory of the "Terminal 2" language learner, the learner who despite unlimited time in the classroom is unable to raise his oral proficiency past the 2+ level on the Foreign Service Institute scale. Such students can communicate in concrete, practical situations in the target culture and can narrate and describe in the past, present, and future but are unable to perform higher level communicative tasks.

Higgs taught a group of students in a Spanish class with the goal of attaining these higher level tasks. Here's what happened:

> None were able to perform the necessary language functions: they were limited to stating and restating their own opinion, saying in effect, 'It's right because I believe it to be right.' No one was able to restate the opposing viewpoint, interpret it in the context of some situation, and show up its shortcomings. (Higgs, 1982)

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There's something happening in his classroom that traditional terms like "language acquisition" or "language learning" don't describe. That something has to do with thinking. Thinking here seems to be affecting the language aptitude of the students. Thinking involves some process of displacing oneself from immediate experience and behavior, reflecting on it, organizing it in the mind. Displacement, reflection, and organization are all qualities used by adults learning a foreign language because of some rather unique conditions. First, the learners' task is to acquire a code for communication. But the foreign language code, if it is the least bit different in the way it organizes experience, must necessarily compete against the louder, more immediate voice of a first language code. Second, the foreign language is a code for communicating between people. But the people who own the foreign language code and their culture--that amalgam of values, behaviors, habitats, faces, bodies, and histories--remain somewhere off in the distance. The first language culture is the primary backdrop of the learner's efforts.

It is clear, of course, that one can get started in a foreign language and gain access to parts of its culture without much depth of what we call "thought." One can order an omelette, buy a train ticket, mail a letter, and get around a foreign city without much reflection. One can talk about oneself, one's family, and one's friends using a section of the foreign language that is a translation of one's first language code. One can even give opinions without

much real "thought."

But when it comes to articulating ideas to a foreigner in his own language, suddenly a point of view, a way of reasoning, a recognition of the values inside that person all become part of one's communicative strategy. Now one is listening not only to the murmur of meaning coming from inside one's own head. One is looking at its destination. That murmur needs to fit the shape of its receptacle. And the displacement that has to take place on one's own patterns of thought seems to have some similarity with the displacement that occurs in thought itself. Discourse is what counts now-- the connections among words and sentences, the inflection of ideas, and their holistic configuration in the context of an interlocutor or audience.

As a consequence of this, it makes sense that the structure of thought in language learners would shape their aptitude for certain language tasks. My research relating the William G. Perry Scheme of Cognitive Development (Perry, 14) with Foreign Language Proficiency as measured by the ACTFL or ILR Scales (2) supports this connection and has lead me to propose the Developmental Hypothesis. This Hypothesis says that lower developmental stages in the cognitive domain retard the achievement of communicative language proficiency; higher develpmental stages facilitate it.

The Conceptual Basis for the Hypothesis

The Perry scheme of cognitive development is a hierarchical,

developmental stage theory that chronicles the changing ways in which individuals explain their understanding of experience, truth, and behavior. It was developed over a period of 30 years out of longitudinal interviews with Harvard University undergraduates. A growing body of research in varying settings and age cohorts has confirmed its usefulness for explaining cognitive development. As elaborated by Perry (14) and extrapolated by other theorists (4, 9, 13), subjects move through a series of 9 stages which may be grouped under the broader headings of Dualism, Multiplicity, Relativism, and Dialectic.

DUALISM (Perry Positions 1 & 2): An individual viewing the world through a dualistic perspective believes that complete, absolute knowledge is attainable and that Authorities (teachers, books, etc.) are the source of knowledge. Knowledge and goodness are seen as quantitative accretions of rightness to be collected by hard work and obedience. Diversity, uncertainty, and multiple perspectives are seen as an unwarranted confusion from poorly qualified Authorities or a challenge by Authorities to find the "right answer". Students at this level prefer lecture, memorization, and feedback tasks. They are able to learn basic information and concepts, and apply them in the limited context of the class. They see theorizing as illegitimate since truth comes from Authorities. Their slogan might be, "Just give me the facts."

MULTIPLICITY (Positions 3 & 4): The individual sees uncertainty, ambiguity, and multiplicity of opinions as legitimate but temporary in areas where Authority hasn't yet found the answers. In Late Multiplicity, he/she

sees multiplicity of opinion to be extensive and raises it to an unstructured epistemological realm where "Everybody has a right to his own opinion" and "My opinion is as good as anyone else's." He enjoys formats where he can express his own opinion or "feelings," but may become impatient listening to the point of view of others. He feels solidarity with peers who are also groping for right answers. The student is concerned with learning how to learn and views qualitative, contextual reasoning as a special case of how Authorities want him/her to learn. Multiplists can compare and contrast (noting diversity) and generate hypotheses from evidence, but they are unable to follow reasoning through to conclusions. Conclusions are based on beliefs, intuitions, whim. Arguments, consequently, often tend to be ad hoc and supporting examples used out of context.

RELATIVISM (Positions 5 & 6): The individual views all knowledge and values (inluding Authority's) as contextual and relativistic. Different answers arise from using different perspectives and methods. The Relativist is able to put facts into context and reason well from evidence to hypothesis to conclusion. He/she can operate in a variety of contexts, styles, learning environments, thought patterms, situations, and resource areas. Able to see various sides of an issue, he will often use expressions like "on the other hand." He/she is more active, a participant in learning, and seeks out authorities (small "a" now) as sources of expertise and experience to use in the

thinking process. Peers may now be resources, not just companions. Because of the ability to take varied perspectives, he/she is more able to empathize.

COMMITMENT IN RELATIVISM OR DIALECTIC (Positions 7, 8 & 9): Believing that knowledge is the outcome of the process of critical inquiry and that the knower plays a crucial role in constructing knowledge, the individual is both willing to endorse conclusions and acknowledge that the inquiry process is fallible. Knowledge claims must be open to re-evaluation through the criticism of other reasoning people, new data, and new theoretical insights. The individual has developed a set of abstract systems that allow him to commit himself to a perspective rather than just arguing from the perspective of others. He/she can consider carefully, evaluate, and reformulate hypotheses and conclusions.

The stage of Dialectic is an extrapolation of aspects of Perry's "Commitment in Relativism"; certain theorists have prolonged Perry's theory along the epistemological dimension (Griffith, 1980). As the population of subjects in this stage is very low, we will not be concerned with it here. In describing this hierarchical scheme, I want to mention that Perry's research showed that subjects could choose to "suspend, nullify, or even reverse the process of growth." Perry (14) calls these choices " Temporizing, Retreat, Escape" (pp. 177-200).

Now let's look at a section of the ACTFL Speaking Proficiency Scale (2) in light of the Perry Scheme. The ACTFL Scale is hierarchical and proceeds from simple to sophisticated real-world communication tasks. It now takes on a particular relief in the light of the Perry Scheme. (See Table A)

ACTFL Level 2: "...Can narrate, describe, and explain in past, present, and future time. Can communicate facts--what, who, when, where, how much--and can explain points of view in an uncomplicated fashion, but cannot conjecture or coherently support an opinion." Comments: the first sentence articulates tasks easily handled through a Dualistic perspective. Explaining one's point of view in an uncomplicated fashion is a task more appropriate to Multiplicity.

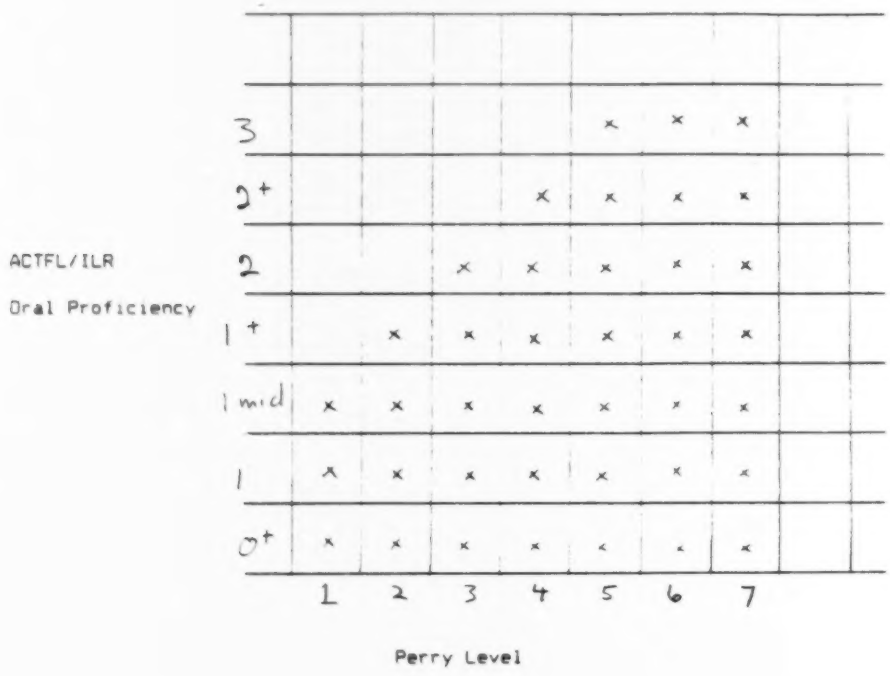
ACTFL Level 2+: " ... Can narrate, describe, and explain in past, present, and future time. Can communicate facts and explain point of view in an uncomplicated fashion consistently. Shows some ability to support opinions, explain in detail, and hypothesize, although only sporadically." Comment: Explaining in detail and hypothesizing are tasks appropriate for Multiplists. Supporting an opinion is a task for Relativism.

ACTFL Level 3: "...Can discuss particular interests and special fields of competence with reasonable ease. Can support opinions, hypothesize, and conjecture. May not be able to tailor language to fit various audiences or discuss highly abstract topics in depth."

Comment: Supporting an opinion is an appropriate cognitive task in Relativism but not before. Handling abstract topics with consistency and perspective is a Relativistic task. Tailoring language to specific contexts is to understand the contextual nature of language, and this, too, is a Relativistic task.

Table A

Theoretical Relationship of Perry Level to ACTFL/ILR Proficiency



From this analysis, it appears that certain thinking tasks underlie certain tasks in the Proficiency scale. If we take the position that you can't say it if you can't think it (unless, of course, you attend to the form of your expression), then we could conclude that certain levels of cognitive

development are necessary before certain oral proficiency tasks become automatic. Specifically, Multiplicity may enable the achievement of Advanced (2 and 2+) tasks and Relativism may enable Superior (3 and 3+) tasks.

Seen through this model of the intersection of the Perry cognitive scheme and the Proficiency communicative scheme, Higgs' (5) frustration in teaching ACTFL/FSI Level 3 tasks to a group of Spanish language students now makes sense:

> "None were able to perform the necessary language functions: they were limited to stating and restating their own opinion, saying in effect, 'It's right because I believe it to be right.' No one was able to restate the opposing viewpoint, intepret it in the context of some situation, and show up its shortcomings."

Higgs and Clifford (5) hypothesize that the "Terminal 2" is a consequence of a learning environment in which language structure is de-emphasized. An explanation of these students' failure could thus be a learning environment where grammar had been de-emphasized. But it would be surprizing if all students in the group had had such preparation. An application of the Developmental Hypothesis is that the "Terminal 2" may also be accounted for by the language learner's level of cognitive development. If we analyze the students' described weaknesses, such an explanation seems plausible.

Higgs' students in fact faced a task appropriate for subjects organizing their experience through the perspective of relativism, but impossible for subjects at lower levels. The students, for their part, express an outlook characteristic of individuals in Multiplicity. Assuming that other behavioral clues confirmed this cognitive position in the students, then the Developmental Hypothesis accounts for the lack of success in the desired course outcomes: the course's proficiency goals were aimed at a cohort incapable of performing the cognitive tasks underlying the communication tasks.

The Empirical Basis for the Developmental Hypothesis

The empirical setting for the hypothesis comes from a French "Conversation and Composition" course. The course met five times per week for 10 weeks and had four components: (1) Students kept a dossier of magazine articles of their own choosing; (2) they wrote weekly compositions using the subject matter from these personal readings; (3) they met in 6-person student-led discussions of their own articles twice a week; (4) two days per week were spent on grammar review organized by communicative function. The assignments in reading, writing, and discussion-leading were designed to encourage and challenge students at different levels of cognitive development as measured on the Perry scheme. This meant that I designed assignments against the background of Dualism, Multiplicity, and Relativism, but not identified as such for the students. The range of communication

tasks in various parts of the course was from ACTFL 1-low to 3. The entering student proficiency level for pre-interviews was 1-mid to 2. Consequently, there was a mix of language levels in the discussions and, since students self-selected discussion formats, there was a variety of discussion types along the three Perry levels. The range of age by college year covered the full 4 years (see Table B).

Table B - Sample Profile

	Highest Semester Level of Previous French		
	3 Semesters	4 Semesters	5 semesters
College Year			
Freshman		5	
Sophomore	1	8	1
Junior		2	
Senior		1	

Males - 6

Females - 12

Research Design

Pre and post measures on the 18 subjects were taken at the beginning and end of the course, 8 to 9 weeks apart, using Perry Level Interviews, ACTFL Interviews, and measures of writing. ACTFL interviews were given and rated by an ACTFL-Certified Rater.

Instrumentation

ACTFL Oral Proficiency: A trained rater interviewed each student pre and post, recorded, and established and ACTFL Oral Proficiency Level rating. The Oral Proficiency rating was correlated with the Perry measures.

Perry Ratings: The format was the Learning Behavior Dilemma or LBD. This is an interview in which trained interviewers probe a student about a narrative concerning how two students handled and were evaluated in a writing assignment. The interviews were recorded, transcribed, and rated for Perry level by the Syracuse Rating Group.

Students also filled out the Learning Context Questionnaire (LCQ) pre- and post-. This is a paper and pencil instrument designed by John V. Griffith and David W. Chapman (6) to measure Perry level; it has been used successfully with groups; however its usefulness for rating individuals has not been established. However, a subset of questions in this instrument designed to test for Relativism were correlated with Oral Proficiency.

Pre- and Post- measures were also taken using the CEEB Listening-Reading French test and a blind-rated evaluation of writing.

Finally, I observed and summarized student behaviors in the choice of class and homework assignments.

Research Results

1. Of significance for the Developmental Hypothesis, a correlation between Perry Position on the LBD and ACTFL Oral proficiency was found ($r=0.59$; $p<0.011$: pre-Perry to pre-Oral); ($r=.50$; $p<0.04$: post-Perry to post-Oral). A correlation also occurred between pre-Perry and post-Oral ($r=.60$; $p<0.009$).

2. For the subset of Relativism questions on the LCQ, there were positive correlations with the ACTFL Oral Proficiency both pre- ($r=.56$; $p<.039$) and post- ($r=.67$; $p<.016$). Pre-LCQ Relativism correlated with post-Oral ($r=.71$; $p<.005$).

3. On the CEEB Listening-Reading French test and the measure of writing, statistically significant change took place, but correlations relative to Perry level were not consistent.

4. There were a number of other hypotheses, results, and conclusions relating to observed student behavior and course design that I have talked about elsewhere. However, one result confirms and repeats Higgs' experience. The discussion part of the course was designed to offer treatments to encourage movement along the cognitive dimension as measured via the Perry Scheme. I provided students with a discussion guide with three different formats, designed but not identified to reflect the three major Perry levels--Dualism, Multiplicity, and Relativism. Students were required to use at least two of the three formats in their discussion leading. The

three formats were: I, Finding Out and Applying; II, Sharing Ideas; III, Defining a Problem and Finding Solutions.

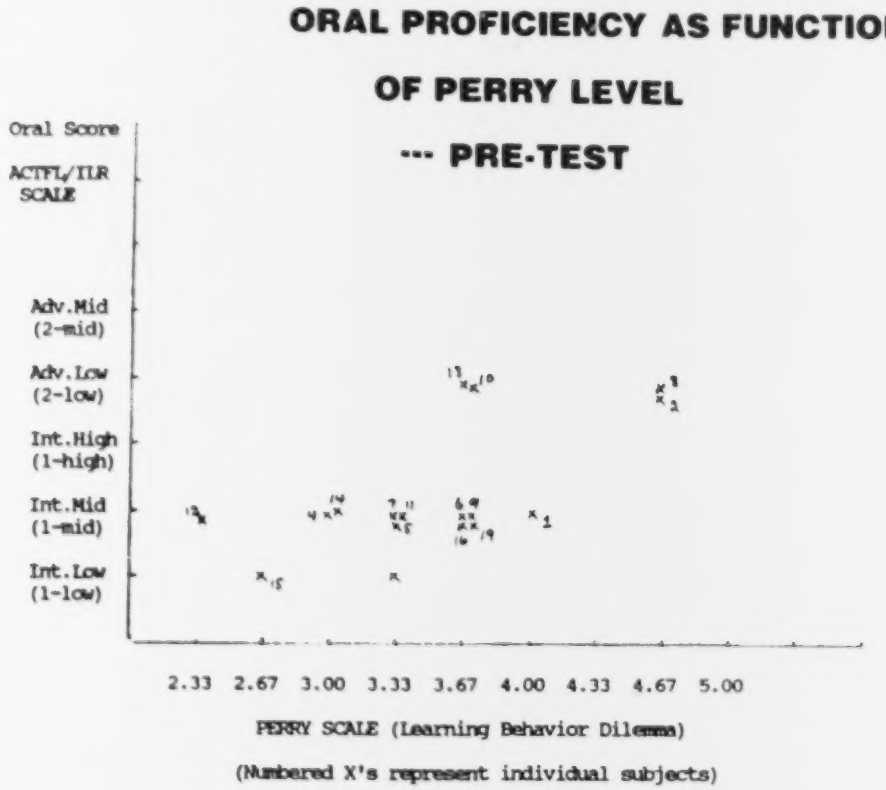
Upon analyzing the discussion scenarios prepared by students for their discussions, it turned out that only one out of 48 used the third discussion format, the Relativist model. The leader of that discussion reported that the students could not master the points of view required which dealt with problems of world hunger. Like Higgs' students, none were able to adopt another's viewpoint, interpret it within the context of a situation, and analyze its strengths and weaknesses--tasks all appropriate for relativism and for Level 3 of the language proficiency scale. Analysis of the Perry data showed that none of the students was in Relativism and the results of the failed Relativistic discussion fit the prediction one could have made if the Perry data were known in advance. The students' minds did not structure knowledge in such a way as to be able to perform these intellectual and communicative tasks.

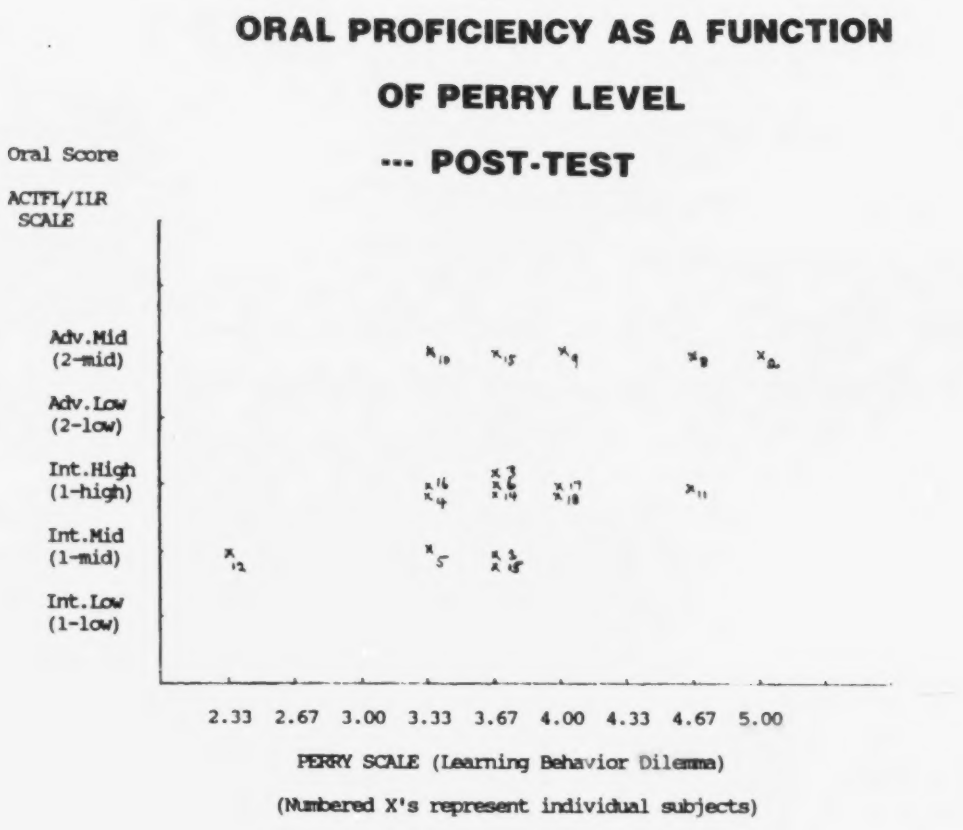
Now I would like to draw some inferences from the theoretical and empirical material that I have here. For the moment, I would like to limit these inferences to foreign language learners not living in the target culture.

Limits to Communicative Proficiency

My research suggests that there may be limits to attainable levels of proficiency on the ACTFL/ILR scales for some individuals. When the

relationship between Perry level and Proficiency level is graphed, the strength and directionality of the correlation is clear. However, looking at the extremes of the curve suggests that certain breakpoints of cognitive development are necessary for progress in proficiency to occur above certain levels. The distribution of subjects on the graphs suggests such a relationship. The two subjects at the lower end of the Perry scale (No. 12 & No. 15) are low in oral proficiency; then students at a level of about 3.5 (Multiplicity) spread up through the range of Advanced Plus (2+); finally another plateau appears to exist in early Relativism (5.0). Significantly, the two subjects who did not progress in terms of oral proficiency were at a Perry level of Dualism, as if they were waiting





to move out of that cognitive level before advancing to a higher level of oral proficiency. From my conceptualization and these graphs, a suggestive working model would be a "step" relationship between Perry level and Proficiency with breakpoints in Multiplicity and Relativism corresponding to "enabling" stages for progress into the Advanced and Superior levels of oral Proficiency respectively. In practical terms, it may be that Dualists are unable to attain an Oral level of 2 (Advanced) until they have passed a breakpoint in Multiplicity. Further, as I suggested in my analysis of Higgs' dilemma, it may be necessary for an indivdual to be in a position of

Relativism before achieving an Oral Level 3 (Superior).

Cognitive Level Affects Ease and Speed of Language Learning

An analysis of Perry level within the context of communicative tasks suggests that cognitive level should, in fact, play a role in language learning aptitude. Language aptitude is actually a bundle of aptitudes since within the domain of language there are multiple tasks and functions. As Higgs and Clifford (5) have suggested in their Relative Contribution model, the weight of the factors in language learning varies according to the oral communication proficiency level. As each factor has different qualities, it is clear that the aptitudes for success at each level change throughout the hierarchy. Although my discussion is limited to oral proficiency, it is clear that the other language skills, though interconnected, also have varying mixes of aptitudes needed for success. It is also clear that some of the aptitudes may be hard-wired within the brain (nature) and others exist as acquired software (nurture).

First, let me review the Higgs/Clifford model.

Higgs and Clifford (5) present a model of the relative contribution of factors needed in learning a foreign language and Higgs (6) elaborates a framework for a curriculum to move students through the various proficiency levels. At the Novice (0 & 0+) level, the lexicon (or individual words), predominates. At the Intermediate level (1 & 1+) or survival level, the

lexicon continues to predominate but grammar begins to be important. Grammar and grammatical accuracy increase and peak as factors at the Advanced (2 & 2+) level, the level of routine social demands and limited work requirements. Sociocultural factors have their heaviest weight at the level of Superior (3), the level of social and professional competence in the foreign culture.

Although my discussion will be set in the context of the ACTFL/ILR scheme described above, I also want to refer to the FSI oral evaluation criteria, which, though similar in many respects, have a somewhat different set of descriptors and rating criteria. For my purposes, the most important categories in the FSI scheme are Discourse Competence, Structure, and Lexicalization.

Aptitudes at the Level of Dualism

For a learner in Dualism, there is but one truth and he finds it in an authority. The Novice (0 & 0+) and Intermediate Low and Mid (1) emphasis on the lexicon meets the Dualist's view: each foreign word has its equivalent in the master code of the native language. The Dualist believes that if you work hard, you'll succeed (please the authority person) and he is capable of learning great quantities of vocabulary. He can apply the vocabulary as long as the correspondence to the master code of native language and the native culture is not threatened. Ath the Intermediate level of practical, survival tasks, a dualistic translation of rudimentary native language syntax into the

target langue is still sufficient. Language is a fact and it's more important that it be "right" (accurate) than that it express personal content. The Dualist has a high affective filter and and anything that challenges the pattern of the native language, culture, and personality is experienced as dangerous. The foreign culture is distinctly "foreign." Ambiguities like the three uses of the imperfect in the romance languages or the ser/estar distinction in Spanish are distinctly uncomfortable and hard to accept. By the same token, there are limits to lexicalization; the divergent semantic mapping of apparent identical words in the two languages is also hard to grasp. For the Dualist, however, the divergence of structure and semantics in the target language can be a challenge for intellectual growth.

Aptitudes at the Level of Multiplicity

The learner in Multiplicity has keyed into the diversity of experience, knowledge, and people--it's pervasive. He sees himself/herself as one among many in the search for truth, even though the truth may be different for each person. As part of this search, the Multiplist likes to "learn how to learn", trying on different ways of organizing learning, expression, and reason. Multiplists are good at comparing and contrasting. In learning a language, he/she is consequently more open to divergent grammatical structures and trying on the "strangeness" of a foreign language and culture. The multiplicity and divergence of certain grammatical and lexical structures vis-à-vis the native language are a source of interest. As the Multiplist is interested in comparing his experiences and views with others, the

communication tasks at Intermediate-High (1+) and Advanced (2) of narration and description in the past, present, and future support his intellectual quest. Vocabulary acquisition supports the expression of the learner's personal point of view. The interest in otherness both in people and areas of learning help to lower the affective filter and make the foreign culture and identity more approachable. However, since the source of truth is ultimately personal whim--"Everybody has a right to his own opinion"--there are limits on the ability to take another's position or point of view. Discourse competence within the context of conversation becomes more important because it supports the quest of knowing others and expressing one's own differences, but it is limited to personal expressiveness; the realization that different discourse strategies need to be used to be effective with the interlocutor or audience has not yet been acquired even though role playing is possible and a precursor to more sophisticated discourse competence. Imitating various models of discourse is possible and a challenge for intellectual growth. Because of the limits on contextual reasoning in Multiplicity, even an extended stay abroad may not bring him/her to the Superior level; this explains the common plateau of 2+ (Higgs, 5) for many college students.

Aptitudes at the Level of Relativism

The learner in Relativism sees all knowledge as contextual and relativistic. He/she can operate in a variety of contexts, styles, learning environments, thought patterns, situations, and resource areas. He/she is aware of the

cultural basis of language and the necessity to use different discourses in different situations. As an individual who can reason from hypothesis to evidence to conclusion, the Relativist can easily handle the Level 3 (Superior) tasks of hypothesizing, supporting his own opinion and that of others, and conjecturing. Because of his/her contextual awareness of truth and experience, the affective filter is not a barrier to language learning. Because of his/her ability to think methodically, mastery of structure may come very easily as may lexicalization through contextual grouping and families of words. Contextualized learning of structure and the lexicon may be a speed to language acquisition. Without other impediments, he may be a very rapid language learner.

Aptitudes at the Level of Dialectic (or Commitment in Relativism)

The learner at the level of Dialectic or Commitment sees knowledge as the outcome of a process of critical inquirry and sees himself as playing a key role in constructing knowledge. As the strategies and openness of Relativism are already acquired, the learner here may simply be more comfortable residing within certain language learning strategies and recognizing their strengths, limitations, and purposes.

Changing Intellect, Changing Aptitude

In reviewing each of the levels, it becomes clear that as one moves up through the Perry Scheme, the repertoire of learning strategies and openness increases. It is also clear that the aptitudes or strategies are different at each level, which leads to the conclusion that different levels of language learners will succeed to the extent that the learning contexts match their cognitive structures. So two questions about language aptitude need to be: "Aptitude for learning a language in what context? Aptitude for learning a language to what proficiency level?" My answer to the second question is that cognitive level is a contributing factor to both the tempo and ultimate level of language proficiency.

It is also clear that the issue of language aptitude is not synchronic. These cognitive structures are not innate. They may, although not necessarily, change over time. With intellectual growth, the language aptitude may increase. For example, a 10-year-old bilingual child would not score above a 2/2+ no matter how "fluent" in the second language while a bilingual adult not stalled in cognitive development would have the potential to progress to higher levels. We say what we think; if a language learner does not think in certain ways, he may not perceive certain varieties of target language as distinctive or not perceive them as relevant. What isn't perceived can't be matched in the learner's language variety and fossilization will occur.

In addition, the relationship is not obviously a straight causal one but rather one of interaction. Many factors, both innate, learned, and environmental, affect the given stage and potential for intellectual growth and, as Krashen (11, 12) has noted, language learning. The diversity and strangeness of a foreign language is in itself, in all likelihood, a spur to intellectual growth. However, for some individuals it may be a threat. The interaction between personality and environment may cause detours and retreats. Perry (14) identifies these moves under the terms "Temporizing," "Retreat," and "Escape" (pp. 177-200).

Temporizing: the person says "I'm just not ready yet" (Perry, 14, p. 178). He puts intellectual growth on hold to consolidate his position, become more comfortable, or wait for a reason to move. The potential is for further growth or for escape.

Retreat: "He may entrench himself, in anger and hatred of 'otherness' in the me-they or we-other dualism of earlier positions. . . . At this point reactive adherence to Authority (the 'reactionary') requires violent repudiation of otherness and of complexity" (Perry, 14, p. 184). Perry underlines the cause for this kind of retreat as a personality structure dependent upon "highly 'authoritarian', all-or-none structures of emotional control. For this person, foreign language may be threatening in its divergent structure, rhythm, values, and culture. To the extent that the military may appeal to this kind of personality structure, certain language candidate groups may need to be screened carefully. I suspect that this

kind of fossilized personality leads to fossilization of language proficiency; the "otherness" of a foreign language is simply too much.

Escape: "He may settle for exploiting the detachment offered by some middle Position on the scale, in the deeper avoidance of personal reponsibility known as alienation" (Perry, 14, p. 177). This is a strategy in multiplicity and relativism often of choosing not to choose or of gamesmanship, of high competence in activity but refusal to grow. Because of the higher cognitive level, it should not have much effect on language learning.

Now let me return to the issue of language aptitude in its broadest focus.

Aptitude is a Function of Personal Intellectual Structure

Aptitude, in my view, is not a fixed set of capacities. Rather, it is a changing inter-relationship between personal capacities, context, and language tasks. I have outlined the changing structure of this relationship in my theory of language capacities at different levels of cognitive development. In this theory of aptitude, I see two holistic categories to which other capacities may contribute and which relate to Perry's intellectual levels. In this conceptualization, Perry is particularly useful, in my view, because he pulls together a complex of thinking and its related affect, behavior, and world view in discrete hierarchical levels.

Here are the two categories:

1. The Diversity Capacity: The capacity to accept, take in, deal with, process, and put into play diversity and divergence in the following areas: lexical-semantic mapping, structure, syntax, rhythm, social role and personality, and culture. The divergences of aspect and mood between French and English, for example, would respond to this capacity. This capacity activates in the Perry level of Multiplicity.

2. The Contextual Capacity: The capacity to perceive, attend to, and put into play the contextual nature of ways of communicating (these ways all varying with different ways of thinking, feeling, behaving,)--qualities seen in Perry's Relativism. This means eventually being able to internalize a repertoire of thinking and communicating styles.

Klein (10) puts matching learner language variety to target language varieties as one of the learner's tasks which becomes increasingly difficult as learner and target varieties approach (pp. 138-166). In addition to content-based contexts, there are situational contexts which vary according to the social and discourse requirements of the situation. Supporting an opinion is one example; it requires particular deictic and anaphoric structures which relate discourse utterances; these structures are organized according to the "genius" of the particular language and are not helped by the spatial, concrete, and, to a lesser degree, temporal reference of more "practical" deictics and anaphora (in Klein's conceptualization of language acquisition, this is a task of "embedding", fixing the communication within

real-world situation). In French, for example, supporting an opinion is characterized by more connected discourse than in English. To support an opinion requires perceiving a more abstract, less concrete way of communicating, motivating the self to acquire it, and synthesizing a repertoire of expressions to match the target discourse.

The contextual capacity, or its lack, may explain the fossilization of learner varieties of language which occurs often at the level of 2/2+. The learner does not perceive the contextual nature of communication, does not view level 3 varieties necessary for communication, and is consequently not able or not motivated to monitor his or her own production in terms of the level 3 language varieties.

In conclusion, it appears that a theoretical elaboration of cognitive development against a widely accepted conceptualization of oral proficiency explains certain aspects of language aptitude. Preliminary research supports this hypothesis. In this model of aptitude, intellectual development is an important factor, a factor which allows for growth in language learning aptitude and suggests an impact on both pace and ultimate level of language acquisition.

March 1989
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Appendix A

Learning Behavior Dilemma

Please read the following assignment and two students' methods of completing the assignment. You should focus on the style in which the students are writing their papers as opposed to the actual topics they cover. As you are reading the two approaches, be thinking which one is closer to your own style. There is no correct approach to completing this assignment; we simply want to understand how you would most comfortably approach the task. Relax and have fun.

ASSIGNMENT:

Your English teacher makes an assignment to write a 500 word essay on the relationship between Huck and Jim in Mark Twain's Huckleberry Finn. The teacher is most interested in hearing your views on Huck's growth as an individual as it relates to his black friend Jim. The teacher indicates that you may use any sources that you wish.

METHOD 1

Susan is very careful to follow instructions and writes a 500 word essay on how Huck comes to know Jim as a person and how their friendship changes his views on black people. She also discusses their relationship within the context of race relations in the mid 1800's.

To research her assignment, she first refers to the Encyclopedia Britannica and looks up both Mark Twain and slavery. She then makes an appointment with the teacher to clarify the assignment and to seek recommendations of sources to consult. Susan then checks out several books on Mark Twain and reads carefully what they say about Huckleberry Finn. She had planned to just start writing her essay, but then noticed that several of her friends were first making outlines. Therefore, Susan outlines her paper, careful to put down each area she wants to cover, and then writes a rough draft. In writing her essay, Susan presents all the facts clearly and concisely, making certain to footnote each source. Her first paragraph discusses Huck Finn as an historical figure, enabling the reader to view the character and his ideas regarding black people within the context of the era in which he lives. The body of the essay discusses several literary critics' interpretations of the growth in Huck's personality, with particular reference to the climatic point at which Huck saves Jim by lying about his race. In the final paragraph Susan elaborates on the interpretation with which she agrees.

When Susan does the final word count, after adding and deleting words, she has a 500 word essay. She spent a total of 36 hours researching and writing her paper.

METHOD 2

Mary decides to approach the assignment by analyzing the moral dilemma that Huck faces in his friendship with Jim. Specifically, she wants to focus on the point at which Huck breaks his own moral code by lying, but at the same time recognizes a higher moral code of protecting Jim's life.

To prepare, Mary consults two books, one of which deals with race relations in Huckleberry Finn, and one which takes an overall interpretive look at the novel. Mary then re-reads portions of the book, focusing on what Huck views as important before the lying scene and after it. To better understand her own views, she then invites a group of friends over to discuss the topic. Mary presents her own views and listens to how the others respond.

To best express her thoughts and complete the assignment, Mary decides to write a narrative poem. Using her own ideas and those of the literary critics she reviewed, she attempts to express Huck's dilemma by writing in the first person. She explores the fact that before the lying scene Huck was most concerned with not lying, stealing or cheating; whereas afterwards, he realizes that there may be times when lying is justified. In her poem, Mary discusses these conflicting feelings in detail and attempts to elaborate on the moment at which Huck accepts his new moral code.

Mary spent a total of 10 hours researching and writing her assignment. Her poem was 425 words.

Questions to accompany Learning Behavior Dilemma

1. Which approach to completing the assignment do you like the most?

2. What are the main points of the approach you chose that appeal to you most? What are the main points of the approach you did not choose that do not appeal to you?

3. If you were given the same assignment, what would you do differently? Please elaborate with some details. (If the student has difficulty talking, use the following probes: How would you prepare for the assignment? What sources would you contact? How much time would you spend on the assignment? How long would your paper be?)

4. What do you think about the length of the two completed assignments?

5. Putting yourself in the teacher's place, to which student would you assign the higher grade?

6. You might be interested to know that these descriptions were written about two assignments that were actually completed for a course. When the professor assigned grades, Susan received a "C+" and Mary received a "B+". How do you account for this difference in grades? Why do you think Mary did not receive and "A"? Do you think the teacher's assignment was appropriate?

7. If Susan and Mary were college roommates, were aware of how each other prepared the assignment, and read each other's papers, how do you think Susan would feel about Mary's grade? Do you think Susan is justified in her feelings? Please explain.

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John V. Griffith
Diana P. Pierce

Appendix B: Learning Context Questionnaire Relativism Items

3. I enjoy courses most when they are more theoretical.

10. I expect that much of what I now believe to be true will change as I continue my education.

11. Essay tests are rewarding if they allow you to integrate what you know.

13. Listening to different points of view on topics helps me to formulate my opinions.

16. I am frequently able to tie together information from several classes even when those classes seem quite different.

19. Determining an appropriate course of action in a given situation depends more on understanding the situation than relying on a standard response.

20. I can learn a great deal from debates when many sides of an issue are examined.

22. I find I frequently have to re-examine my view in light of the new people I meet and the new things I learn.

24. I like classes in which students have to do much of the research to answer the questions that come up in discussions.

26. If my teacher or professor does not have an answer to my question, it's usually because my teacher wants me to answer it for myself.

28. Scientific knowledge is based on as many assumptions as is philosophical knowledge.

29. Good teachers push you to understand a variety of perspectives on controversial issues.

34. I am increasingly able to see how the various areas of knowledge are interrelated.

41. Often people seem to disagree even when they are working from the same set of facts.

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